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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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JAMES M. STOVER
NCR CORPORATION
1700 SOUTH PATTERSON BLVD, WHQ4
DAYTON, OH 45479

EXAMINER	
MAHMOUDI, HASSAN	

ART UNIT	PAPER NUMBER
2175	13

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/728,852	Applicant(s) WATSON ET AL.	
	Examiner Tony Mahmoudi	Art Unit 2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 11-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-9,11-17,19-25 and 28-31* is/are rejected.

7)☒ Claim(s) *4,5,18,26 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SAM RIMELL
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. In response to communications filed on 22-March-2004, claims 1-9 and 11-31 are presently pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 6-9, 11-17, 19-25, and 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Kabra et al (U.S. Patent No. 6,507,834.)

As to claim 1, Kabra et al teaches a method (see Abstract), comprising:

receiving data to be stored in a database system having plural data servers (see column 7, lines 4-15);

receiving information associated with at least one characteristic of the data (see column 12, lines 4-10, where "characteristic of the data" is read on "dimensions and size of the related master object");

partitioning the data for storage in the database system based on the characteristic associated with the data (see column 16, lines 58-59); and

storing the partitioned data in storage units associated with the plural data servers (see column 6, line 66 through column 7, line 15, and see column 8, line 66 through column 7, line 9); and

in response to a database query (see column 5, lines 57-66), selecting less than all the plural data servers based on the positioning of the data to reduce a number of data servers involved in processing the database query (see column 7, lines 15-19.)

As to claim 2, Kabra et al teaches wherein receiving the information comprises receiving the information from a client system (see column 7, lines 27-29.)

As to claim 3, Kabra et al teaches wherein receiving the information comprises receiving at least one of an average value of the data, a uniform distribution of the data, a minimum value of the data, and a maximum value of the data (see column 8, lines 25-32.)

As to claim 6, Kabra et al teaches wherein partitioning the data for storage in the database system comprises dividing the data into buckets containing related data (see column 9, lines

10-26, where "dividing the data into buckets" is read on "break-up of ASCII plan into a list of segments".)

As to claim 7, Kabra et al teaches wherein partitioning the data comprises organizing the data into related portions (see column 12, lines 11-18.)

As to claim 8, Kabra et al teaches wherein partitioning the data further comprises executing an algorithm to organize the data (see column 8, lines 17-24.)

As to claim 9, Kabra et al teaches wherein storing the partitioned data in the database system comprises storing the partitioned data in a relational database system (see column 6, lines 48-50.)

As to claim 11, Kabra et al teaches a system (see column 1, lines 30-34), comprising:

a database (see column 6, lines 48-50);

a network interface (see column 7, line 61 through column 8, line 1);

plural storage modules and data servers (see column 6, line 66 through column 7, line 19);

a database controller coupled to the database (see figure 1, where "database controller" is read on "query coordinator **104**", coupled to the "data servers", through connection **134**), wherein the database controller is adapted to receive partitioning information and perform a partitioning task on data received through the network interface based on the partitioning

information to partition the data into plural groups (see figure 3, and see column 8, line 66 through column 9, line 8),

the database controller adapted to further store the plural groups of the data partitioned by the partitioning task into the plural storage modules associated with corresponding plural data servers (see column 6, line 66 through column 7, line 15, and see column 8, line 66 through column 7, line 9),

the database controller (see figure 1, where "database controller" is read on "query coordinator **104**", coupled to the "data servers", through connection **134**) adapted to select, in response to a database query, less than all the plural data servers based on the partitioning information to reduce a number of data servers involved in processing the database query (see column 7, lines 15-19.)

As to claim 12, Kabra et al teaches wherein the database is part of a parallel database system (see column 9, lines 18-20.)

As to claim 13, Kabra et al teaches wherein the database is a relational database (see column 6, lines 48-50.)

As to claim 14, Kabra et al teaches wherein the database controller comprises:

a query coordinator coupled to the network interface, the query coordinator to receive the database query from the network interface (see figure 1, where "database controller" is read on "query coordinator **104**", coupled to the "data servers", through connection **134**);

a partitioner to partition data and perform selecting of less than all the plural data servers (see column 7, lines 53-56); and

a partitioner data storage coupled to the partitioner, the partitioner data storage to store the partitioning information associated with at least one characteristic of the data to enable the partitioner to partition data (see column 6, line 66 through column 7, line 15, and see column 8, line 66 through column 7, line 9.)

As to claim 15, Kabra et al teaches wherein the partitioner is capable of executing an algorithm, based on the stored partitioning information, for partitioning the data (see column 8, lines 17-24.)

As to claim 16, Kabra et al teaches wherein the plural data servers are adapted to store and access partitioned data in the database (see figures 5 and 6A, and see column 11, lines 22-43.)

As to claim 17, Kabra et al teaches the system further comprising a client system, wherein the client system sends data to the database through the network interface (see figure 5, and see column 7, lines 27-29.)

As to claim 19, Kabra et al teaches an article (see Abstract) comprising one or more storage media (see column 16, line 51 through column 17, line 4) containing instructions that when executed cause a device to:

For the teachings of the remaining steps of this claim, the applicant is kindly directed to remarks and discussions made in claim 1 above.

As to claim 20, Kabra et al teaches wherein the instructions when executed cause the device to execute an algorithm to partition the data (see column 8, lines 17-24.)

As to claim 21, Kabra et al teaches wherein the instructions when executed cause the device to divide the data into segments containing related data (see column 9, lines 10-26, where "dividing the data into buckets" is read on "break-up of ASCII plan into a list of segments".)

As to claim 22, Kabra et al teaches wherein receiving the information comprises receiving organizational information (see column 12, lines 11-18), and wherein selecting less than all the plural data servers is based on the organizational information (see column 7, lines 15-19.)

As to claim 23, Kabra et al teaches wherein selecting less than all the plural data servers (see column 7, lines 15-19) is based on the organizational information (see column 12, lines 11-18) and a characteristic of data requested by the database query (see column 12, lines 4-10, where "characteristic of the data" is read on "dimensions and size of the related master object").

As to claims 24, 28, and 31, it is inherent the step of "selecting at least one more data server to process the database query if the search results are not satisfactory", can be achieved manually, by the user entering a second search.

As to claim 25, Kabra et al teaches partitioning the data (see column 16, lines 58-59.) As for the step of "wherein partitioning the data comprises partitioning the data into logical groups", there is no distinction between "partitioning the data" and "dividing the data into logical groups", since the act of "partitioning" provides a "logic" for how data items are to be separated and stored.

As to claim 29, Kabra et al teaches wherein the instructions when executed cause the device to receive information comprising partitioning information (see figure 3, and see column 8, line 66 through column 9, line 8.)

As to claim 30, Kabra et al teaches wherein the instructions when executed cause the device to select less than all the plural data servers (see column 7, lines 15-19) based on the partitioning information (see column 12, lines 11-18) and a characteristic of data requested by the database query (see column 12, lines 4-10, where "characteristic of the data" is read on "dimensions and size of the related master object").

Allowable Subject Matter

4. Claim 4-5, 18, and 26-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, Kabra et al (U.S. Patent No. 6,507,834), Wagner et al (U.S. Patent No. 6,532,517), and Kenner et al (U.S. Patent No. 5,956,716), Seymour et al (U.S. Patent No. 6,141,454), Reiner et al (U.S. Patent No. 6,289,334), Nori et al (U.S. Patent No. 6,061,690), Natarajan (U.S. Patent No. 5,400,371), do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claims):

wherein partitioning the data comprises defining straight-line segments based on at least one of the average value of the data, the uniform distribution of the data, the minimum value of the data, and the maximum value of the data, as claimed in claim 4.

Claim 5 is objected to as being dependent from the objected to dependent claim 4.

wherein the client system is adapted to further send the partitioning information to be used by the database controller to partition the data, as claimed in claim 18.

the method further comprising storing the information by a partitioner, wherein selecting less than all the data select is performed at least in part by the partitioner, as claimed by claim 26.

the database controller to select less than all the plural data servers based on the partitioning information and a characteristic of data requested by the database query, as claimed in claim 27.

Response to Arguments

6. Applicant's arguments made in the response filed on 22-March-2004 with respect to the rejected claims in view of the cited references have been fully considered but they are moot in view of the new grounds for rejection.

Conclusion

7. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

SAM RIMELL
PRIMARY EXAMINER

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May 25, 2004